IN THE CLAIMS

1. (Original) A method for handling updates to memory in a distributed shared memory system, comprising:

receiving ownership of data at a first processor;

initiating an initial update to memory request for the data from the first processor;

forwarding the initial update to memory request to a memory directory associated with a home memory for the data;

initiating subsequent updates to memory requests for the data;

maintaining a most recent subsequent update to memory request;

receiving an update acknowledgment corresponding to the initial update to memory request indicating that the data has been updated in its home memory;

forwarding the most recent subsequent update to memory request to the memory directory for processing in response to the update acknowledgment.

2. (Original) The method of Claim 1, further comprising:

discarding all but the most recent update to memory request.

3. (Original) The method of Claim 1, wherein the initial update to memory request is an implicit writeback.

4. (Original) The method of Claim 1, wherein the most recent subsequent update to memory is an implicit writeback.

5. (Previously Presented) The method of Claim 4, further comprising:

initiating new updates to memory requests for the data;

maintaining a most recent new update to memory request;

receiving an update acknowledgment corresponding to the most recent subsequent update to memory request indicating that the data has been updated in its home memory;

forwarding the most recent new update to memory request to the memory directory for processing in response to the update acknowledgment corresponding to the most recent subsequent update to memory request.

6. (Original) The method of Claim 1, wherein the most recent subsequent update to memory is a normal writeback.

7. (Previously presented) The method of Claim 6, further comprising:

initiating new updates to memory requests for the data;

receiving an update acknowledgment corresponding to the most recent subsequent update to memory request indicating that the data has been updated in its home memory;

forwarding the new updates to memory ~~request~~ requests to the memory directory ~~in order~~ for processing in response to the update acknowledgment corresponding to the most recent subsequent update to memory request.

8. (Original) The method of Claim 1, further comprising:

receiving a read request for the data at the memory directory from a second processor prior to receiving the initial update to memory request;

transferring an intervention request from the memory directory towards the first processor to obtain the data for the second processor;

providing the data to the second processor from the first processor prior to processing the initial update to memory request.

9. (Original) The method of Claim 8, further comprising:

providing a speculative copy of the data from the memory directory to the second processor.

10. (Original) The method of Claim 8, wherein the second processor obtains ownership of the data.

11. (Previously Presented) A system for handling updates to memory in a distributed shared memory system, comprising:

a plurality of processors on a local bus, a first one of the plurality of processors operable to obtain ownership of data, the first one of the plurality of processors operable to send an initial update to memory request for the data in response to ownership of the data;

a processor interface operable to forward the initial update to memory request, the processor interface operable to receive subsequent updates to memory requests for the data from the plurality of processors, the processor interface operable to maintain a most recent subsequent update to memory request for the data;

a memory directory operable to receive the initial update to memory request, the memory directory operable to update the data in its associated home memory, the memory directory operable to generate an acknowledgment upon updating the data, the processor interface operable to forward the most recent subsequent update to memory request for the data to the memory directory for processing in response to the acknowledgment.

12. (Original) The system of Claim 11, wherein the processor interface is operable to discard all but the most recent subsequent update to memory request.

13. (Original) The system of Claim 11, wherein the initial update to memory request is an implicit writeback.

14. (Original) The method of Claim 11, wherein the most recent subsequent update to memory is an implicit writeback.

15. (Original) The method of Claim 14, wherein the processor interface is operable to receive new updates to memory requests for the data from the plurality of processors, the processor interface operable to maintain a most recent new update to memory request, the processor interface operable to receive an update acknowledgment corresponding to the most recent subsequent update to memory request indicating that the data has been updated in its home memory, the processor interface operable to forward the most recent new update to memory request to the memory directory for processing in response to the update acknowledgment.

16. (Original) The method of Claim 11, wherein the most recent subsequent update to memory is a normal writeback.

17. (Previously Presented) The method of Claim 16, wherein the processor interface is operable to receive new updates to memory requests for the data from the plurality of processors, the processor interface operable to receive an update acknowledgment corresponding to the most recent subsequent update to memory request indicating that the data has been updated in its home memory, the processor interface operable to forward the new updates to memory requests to the memory directory for processing in response to the update acknowledgment.

18. (Original) The method of Claim 11, wherein the memory directory is operable to receive a read request for the data from a remote processor prior to receiving the initial update to memory request, the memory directory operable to transfer an intervention request from the memory directory to the processor interface to obtain the data for the remote processor, the processor interface operable to provide the data to the remote processor prior to processing the initial update to memory request.

19. (Original) The method of Claim 18, wherein the memory directory is operable to provide a speculative copy of the data to the remote processor.

20. (Original) The method of Claim 18, wherein the remote processor obtains ownership of the data.